



SOUTHERN CALIFORNIA  
**EDISON**

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February 25, 2005

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C., 20555-0001

Subject: **Docket No. 50-362**  
**60-Day Post Refueling Outage Inspection Report**  
**for NRC Bulletin 2004-01**  
**San Onofre Nuclear Generating Station, Unit 3**

- References: 1) NRC Bulletin 2004-01, Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors, Issued May 28, 2004
- 2) Letter from Dwight E. Nunn (SCE) to the U. S. Nuclear Regulatory Commission, Subject: Docket Nos. 50-361 and 50-362 60-day Response to NRC Bulletin 2004-01: Inspection of Alloy 82/182/600 Materials Used In The Fabrication Of Pressurizer Penetrations And Steam Space Piping Connections At Pressurized-Water Reactors, San Onofre Nuclear Generating Station, Units 2 and 3, dated July 23, 2004

Dear Sir or Madam:

This letter provides the Southern California Edison Company (SCE) 60-day post refueling outage inspection report as requested in item (2)(a) of NRC Bulletin 2004-01 (Reference 1).

A110

**Requested Information:**

"Within 60 days of plant restart following the next inspection of the Alloy 82/182/600 pressurizer penetrations and steam space piping connections, the subject PWR licensees should... submit to the NRC a statement indicating that the inspections described in the licensee's response to item (1)(c) of this bulletin were completed and a description of the as-found condition of the pressurizer shell, any findings of relevant indications of through-wall leakage, followup NDE performed to characterize flaws in leaking penetrations or steam space piping connections, a summary of all relevant indications found by NDE, a summary of the disposition of any findings of boric acid, and any corrective actions taken and/or repairs made as a result of the indications found,..."

**SCE Response:**

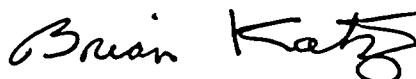
The San Onofre Nuclear Generating Station (SONGS) Unit 3 Cycle 13 refueling outage was completed on December 28, 2004. SCE completed all inspections described in SCE's response to item (1)(c) of NRC Bulletin 2004-01 (Reference 2) that were scheduled for the SONGS Unit 3 Cycle 13 refueling outage. There were no indications of any degradation of the pressurizer shell in the vicinity of any pressurizer penetrations. There were no findings of relevant indications of through-wall leakage and no follow up non-destructive examination (NDE) was required. There were no findings of boric acid leakage, and therefore, no dispositions of such findings were required.

SCE removed two heaters for replacement due to electrical failure. Removal of these two heaters provided an opportunity for proactive NDE inspection of the associated heater sleeves. SCE voluntarily performed Eddy Current Testing (ET) of these two heater sleeves and found both of them to contain crack-like indications on the inside diameter (ID) surface. The pressurizer heater sleeve at location C-2 ET results showed one axial indication 0.83 inches in length and 65 percent through wall. SCE performed follow-up Ultrasonic Testing (UT) examinations. The axial indication in heater sleeve C-2 was of sufficient size and depth to be identified using UT and was measured to be 0.53 inches in length and 100 percent through wall. The UT data shows the indication to be at and above the weld and located approximately 55° from the downhill side of the weld. The pressurizer heater sleeve at location J-1 ET results showed one circumferential and four axial indications. The circumferentially oriented indication at location J-1 was approximately 0.27 inches in length and approximately 20 percent through wall in depth. The axial indications ranged in estimated length from 0.12 to 0.80 inches and ranged in estimated depth from 26 percent to 38 percent through wall. Three of the four axial indications were determined to be above the weld. The elevation of the remaining axial indication and the circumferential indication appear to be right above the weld and go into the weld. The UT examination did not identify any detectable indications in the pressurizer heater sleeve at location J-1. The differences in the ET and UT results are expected due to the nature of a surface examination versus a volumetric examination.

Based on the ET and UT inspection results, a conservative decision was made to replace all of the remaining Alloy 600 heater sleeves during the Unit 3 Cycle 13 outage. The Alloy 600 sleeves were replaced with Alloy 690 using the half-nozzle repair technique.

Should you have any questions, please contact Mr. Jack Rainsberry at (949) 368-7420.

Sincerely,

A handwritten signature in black ink that reads "Brian Katz". The signature is fluid and cursive, with the first name "Brian" and the last name "Katz" clearly distinguishable.

Brian Katz, Vice President  
Nuclear Oversight and Regulatory Affairs

cc: B. S. Mallett, Regional Administrator, NRC Region IV  
B. M. Pham, NRC Project Manager, San Onofre Units 2 and 3  
C. C. Osterholtz, NRC Senior Resident Inspector, San Onofre Units 2 and 3

State of California  
County of San Diego

Brian Katz  
Brian Katz, Vice President

Subscribed and sworn to (or affirmed) before me on this 25<sup>th</sup> day of

February, 2005, by Brian Katz,

personally known to me or proved to me on the basis of satisfactory evidence to be the  
person who appeared before me.

Frances M. Thurber  
Notary Public



(4 Page Letter)